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| 10/725,312 | 12/02/2003 | Norihiro Yamamoto | R2184.0283/P283 | 4926 |
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| DICKSTEIN SHAPIRO LLP | | | EXAMINER | |
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| Washington, DC 20006-5403 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/725,312

Applicant(s)

YAMAMOTO, NORIHIRO

Examiner

LIXI CHOW

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2008 and 12 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 3, 5-7 and 10-25 is/are pending in the application.
- 4a) Of the above claim(s) 6, 7, 12 and 14-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 3, 5, 10, 11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/10/08 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2, 3 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishitobi et al. (US 2003/0090973; hereafter Ishitobi).

Regarding claim 2:

Ishitobi discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see Fig. 1 and Fig. 4; each of the split recording data A-J corresponds to a predetermined amount of data);

measuring a recording state of the optical data recording medium immediately before the interruption (see Fig. 4; a portion of the data recording in area 304 is being reproduced to measure the recording state);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state (see par. [0033] and par. [0053]); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see Fig. 4; next recording operation is started at the beginning of area 305),

wherein in the step of interrupting, the predetermined amount of data is determined so that a time period required for completing recording of the predetermined amount of data is shorter than a time period over which a recording quality degrades due to a rise of a temperature of the laser (see par. [0055]),

in the step of measuring, the recording state being measured in a seek operation performed when starting the next recording operation after the interrupted recording operation (see Fig. 4 and par. [0042]; the seek operation corresponds to the operation when the head is being moved to a specific location of the record area in area 304).

Regarding claim 3:

Ishitobi discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted

from a laser (see Fig. 1 and Fig. 4; each of the split recording data A-J corresponds to a predetermined amount of data);

measuring a recording state of the optical data recording medium immediately before the interruption (see Fig. 4; a portion of the data recording in area 304 is being reproduced to measure the recording state);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state (see par. [0033] and par. [0053]); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see Fig. 4; next recording operation is started at the beginning of area 305),

wherein in the step of interrupting, the predetermined amount of data is determined so that a length along a radial direction of the optical data recoding medium covered by the predetermined amount of data is shorter than a length over which a recording quality degrades due to a fluctuation of a sensitivity of a recording layer of the optical data recoding medium (see Fig. 1; the length of a predetermined amount is the split area A for example; the length over which a recording quality degrades due to a fluctuation of a sensitivity is represented by the whole area at the bottom of Fig. 1),

in the step of measuring, the recording state being measured in a seek operation performed when starting the next recording operation after the interrupted recording operation (see Fig. 4 and par. [0042]; the seek operation corresponds to the operation when the head is being moved to a specific location of the record area in area 304).

Regarding claim 10:

Ishitobi discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see Fig. 1 and Fig. 4; each of the split recording data A-J corresponds to a predetermined amount of data);

measuring a recording state of the optical data recording medium immediately before the interruption to measure a recording quality (see Fig. 4; a portion of the data recording in area 304 is being reproduced to measure the recording state);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording quality (see par. [0033] and par. [0053]); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see Fig. 4; next recording operation is started at the beginning of area 305),

wherein in the step of measuring, the recording quality is measured in a seek operation performed when starting the next recording operation after the interrupted recording operation (see Fig. 4 and par. [0042]; the seek operation corresponds to the operation when the head is being moved to a specific location of the record area in area 304), a setting being made so that a reading quality is an optimum during the measurement of the recording quality, and the setting being made so that the recording quality is an optimum after the measurement of the recording

quality (see Fig. 2 and Fig. 4; at the end of recording the data in area 304, the system controller 208 switches the recording light to reproducing light; the reproducing light is inherently set to an optimum condition in order to accurately measure the recording quality; also see par. [0053]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishitobi et al. (US 2003/0090973; hereafter Ishitobi) in view of Takeda (US 2003/0043714).

Regarding claim 5

Ishitobi discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see Fig. 1 and Fig. 4; each of the split recording data A-J corresponds to a predetermined amount of data);

measuring a recording state of the optical data recording medium immediately before the interruption (see Fig. 4; a portion of the data recording in area 304 is being reproduced to measure the recording state);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state (see par. [0033] and par. [0053]); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see Fig. 4; next recording operation is started at the beginning of area 305),

wherein said interrupting occurs upon completion of having recorded said predetermined amount of data (see Fig. 4; interruption occurs at the end of area 304).

Ishitobi discloses the claimed invention except for having a change of the recording power in each correction is restricted to be less than a predetermined value.

However, Takeda discloses an optical data recording method, comprising the step of:

correcting a recording power of the laser beam (see Fig. 2), wherein in the step of correction, a change of the recording power in each correction is restricted to be less than a predetermined value (see Abstract and Fig. 2; the predetermined value corresponds to the allowable recording power level P_{lim}).

At the time the invention was made, it would have been obvious to modify the recording method of Ishitobi to restrict the change of recording power to be less than a predetermined value as suggested by Takeda. One of ordinary skill in the art would have been motivated to do this because damages to the recording layer can be prevented.

6. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishitobi et al. (US 2003/0090973; hereafter Ishitobi) in view of Applicant's admitted prior art (hereafter AAPA).

Regarding claim 11:

Ishitobi discloses all the features in claim 10; however, Ishitobi does not disclose setting an offset of a focus position of a focus servo.

To the contrary, AAPA discloses that it is known in the art that an offset of a focus position of a focus servo is set so as to improve the recording/reproducing performance (see par. [0009]-[0010]).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Ishitobi and AAPA. The motivation to combine these two teachings is to improve the recording/reproducing performance; hence optimum signal quality can be recorded onto and reproduced from the recording medium.

Regarding claim 13:

Claim 13 recite similar limitations as in claims 10 and 11. Therefore, the combination of Ishitobi and AAPA discloses all the features in claim 13 (see claims 10 and 11 above). Also, see Fig. 2 of Ishitobi for the optical data recording device.

Response to Arguments

7. Applicant's arguments with respect to claims 2, 3, 5, 10, 11 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ueki (US 2003/0072234) is cited to show a related art reference that teaches performing test recording periodically.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIXI CHOW whose telephone number is (571)272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lixi Chow/

Examiner, Art Unit 2627